

Prospectus - Museum Beacon System

We are developing a product which will allow museums to purchase beacons and configure those beacons to work with their museum system, which they can then use to display information about the exhibits. This will allow the museum to display all the content they would like about their exhibits, as well as provide additional descriptions, history, images, audio, and games to help their customers understand the pieces of history they are looking at.

Due to the beacons, this is a niche that has not yet been filled. The context aware app field is very focused on stores and how a store can use these to better track their customers, so it hasn't been applied to something like a museum up to this point in time. This type of app would be beneficial to those with visual impairments (using the audio), to help better engage children while at the museum, as well as others looking to gain more information about a particular exhibit. This technology also does not have to be limited to museums, it could also be used for art exhibits, or any similar displays.

There are several areas of technical innovation we will be hitting on this project. The first is the connectivity to the beacons and working with them as the primary technology that makes this product work. We will be using the iBeacon (for iOS) and Eddystone (for Android) frameworks to allow for connections to the beacons. We will also be building a back-end that allows the museum to customize the content entered for their exhibits, which means we are essentially building our own content management system to go along with the apps.

Backlog:

- Create Parse Database
- Create the Backend for Content changes
- Create Baseline App with one template (iOS) (only images and text)
- Create Baseline App with one template (Android) (only images and text)
- Create Configuration App used to Configure Beacons (iOS)
- Create Configuration App used to Configure Beacons (Android)
- Add Audio capabilities
- Add ability to use 1 beacon for multiple exhibits
- Add Hotspot Tracking (Museums can see where people spend the most time)
- Create a Preview View on the Backend
- Create a Web Page to sell our product
- Add automatic field generator to backend that adds fields automatically based on config app

Relevant Principles

- 1.01. Accept full responsibility for their own work.
- 1.02. Moderate the interests of the software engineer, the employer, the client and the users with the public good.
- 4.01. Temper all technical judgments by the need to support and maintain human values.
- 5.02. Ensure that software engineers are informed of standards before being held to them.
- 5.04. Assign work only after taking into account appropriate contributions of education and experience tempered with a desire to further that education and experience.
- 5.09. Ensure that there is a fair agreement concerning ownership of any software, processes, research, writing, or other intellectual property to which a software engineer has contributed.
- 7.02. Assist colleagues in professional development.
- 7.03. Credit fully the work of others and refrain from taking undue credit.